December 29, 2001

Ms. Magalie Roman Salas
Secretary
Federal Communications Commission
Washington, D.C. 20554


Re:   *Ex Parte* Submission of ATX Technologies, Inc.
WTB Docket No. 01-108

Dear Ms. Salas:

On behalf of ATX Technologies, Inc., submitted for the record in the above proceeding is a copy of ATX's response to the *Request for Comments on the Deployment of Broadband Networks and Advanced Telecommunications* by the National Telecommunications and Information Administration (NTIA) of the Department of Commerce.  In its comment, ATX sets forth the challenges faced in moving to the digital environment and how a reasoned transition must ensure that the fundamental strengths of the Nation's present wireless network must be preserved.

A copy of the submission is being provided to Mr. Furth, Mr. Steinberg and Mr. Jackson of the Wireless Telecommunications Bureau.


Respectfully,



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202.772.1981



Copy provided to:  Mr. David Furth, Mr. Jeffrey F. Steinberg, and Mr. Jay Jackson, Wireless Telecommunications Bureau

December 19, 2001

The Honorable Nancy J. Victory
Assistant Secretary for Communications and Information
U.S. Department of Commerce
National Telecommunications and Information Administration
Room 4713 Hoover Building
1401 Constitution Avenue, NW
Washington, D.C. 20230

      Attention:  Ms. Josephine Scarlett
                Office of the Chief Counsel
                National Telecommunications and Information Administration

                Re:  Notice, Request for Comments on *Deployment of Broadband Networks and Advanced Telecommunications*, Docket No. 01119273-1273-01, RIN 0660-XX13

Dear Assistant Secretary Victory:

On behalf of ATX Technologies, Inc., this letter responds to the request of the National Telecommunications and Information Administration (NTIA) request for comment regarding the Deployment of Broadband Networks and Advanced Telecommunications Services. Our comments relate to NTIA's request for information regarding the challenges in deploying broadband services via wireless and satellite networks, specifically the evolution from analog networks to the digital. We urge that prior embracing the digital environment; a reasoned transition must evolve to ensure that fundamental strengths of the Nation's present wireless network are preserved.

ATX Technologies, Inc. (ATX) is a provider of telematics services to automobile manufacturers (original equipment manufacturers or "OEMs"). The telematics services provided by ATX integrate wireless communications, location technology, in-vehicle and off-board computer technology and the availability of live operators to provide enhanced emergency response and other needs to individuals who have telematics capability in their vehicle. At the heart of ATX's technology is the ability to automatically notify emergency responders in the event of a collision, to locate precisely the individual confronted with an emergency, to communicate with the vehicle and its occupants, to determine the emergency the individual is facing, to help accelerate emergency response to the vehicle and to provide public safety agencies with critical data about the accident

from in-vehicle sensors and personal information volunteered by the vehicle owner.

The cornerstone of ATX's telematics services is automatic crash notification ("ACN") and the in-vehicle Mayday button, which rely upon analog cellular networks to simultaneously transmit critical data and open a voice channel between the vehicle and an ATX call center. Similar to the safety benefits provided by standard factory installation of seat belts and air bags, telematics-based ACN/Mayday systems represent the latest generation of in-vehicle safety technology. The ACN service automatically notifies a private telematics call center, such as ATX's, that a vehicle's air bag or emergency-tensioning restraint has been deployed. Similarly, "Mayday" service signals the call center when the motorist pushes an in-vehicle emergency call button. Currently, ATX alone has over 300,000 subscribers and receives over 60,000 signals per month from motorists with telematics-equipped vehicles. There are over 2 million vehicles on the road today with telematics systems. In addition, ATX and other telematics service providers offer other, location-based safety-related services such as routing assistance, roadside assistance, real-time traffic reports, real-time tire pressure monitoring and remote vehicle diagnostics which, to be effective in all potential travel scenarios, require broad coverage provided by today's coast-to-coast analog network.

The automobile and telematics industry, without government mandate, have committed substantial investment to take advantage of the full capabilities of the nation's wireless network to provide vital information to public safety agencies and enhanced, location-based assistance to motorists in need. ACN is the kind of life-saving innovation many contemplated that E911 systems, relying upon the ubiquitous coverage of the analog network, would make possible. In sharp contrast to the status of government-mandated E911, the automotive industry has commenced deploying telematics technologies and equipment that enhance driver safety and greatly assist emergency and medical personnel in their critical work. This investment and the benefits that have flowed from it, is an example of how telecommunications technologies can bring tangible benefit to a range of areas, in this case, vehicle safety.

**How Telematics Technology Developed**

Telematics technology was developed and built around the Advanced Mobile Phone Service ("AMPS") Analog Cellular Compatibility Standard (the "Standard"). The Standard adopted by the Federal Communications Commission (FCC) is currently set forth in the Commission's regulations at 47 C.F.R. § 22.901(d). The Standard requires cellular carriers to provide analog cellular services in compliance with the AMPS standard, so long as there are customers who subscribe to those analog services. Recently, several, but not all, wireless carriers are advocating expeditious elimination of the Standard, on the premise that their network capacity should be devoted solely to a digital format. The FCC has an outstanding proceeding that is considering the issue.

The AMPS system was developed to provide a nationwide, single standard, wireless telephone service. Bandspace was allocated and wireless carriers were selected to provide that service. To guarantee that the telephones manufactured and sold could

use this service across the country the interested parties adopted a standard. The FCC, as part of the authorization to use the bandspace, required that carriers adhere to this common standard. By allowing a user to roam the country using the same telephone in all markets, the AMPS system forms the backbone of the country's largest single standard, wireless network. This national framework therefore provides a valuable safety net (a simple phone call away from help) to anyone traveling virtually anywhere in the United States.

Since the AMPs wireless system was similar to terrestrial telephone systems, it could be used for most the same kinds of things. One of the first was sending digital data from computers over the system. Since the AMPS system acted in most ways like the familiar terrestrial telephone system, applications associated with terrestrial systems could be used over the AMPS cellular system. Data files could be exchanged. Computers were linked to specially adapted AMPS telephones and the data could be sent over the airways.

Telematics evolved from this environment. Its critical application in the AMPS environment is the ability to transmit simultaneously voice and data. With pervasive redundancy features and the ubiquitous analog network, telematics allows simultaneous voice communication with vehicle occupants and transmission of the vehicle's location and other data pertaining to a mobile emergency to be available nationwide in real-time.

What is emerging in telematics is the capability to provide on the scene information regarding the type and degree of injury to vehicle passengers involved in a collision. Based on historical research that examines collisions, place of impact and resulting injury, sensors embedded in the vehicle are able to determine where passengers are located in the vehicle, the impact experienced and the likely injury and transmit this information, through telematics technology to the hospital emergency room or trauma center. With such information, medical and emergency personnel can not only determine the response necessary but do so within the golden hour that is so critical to saving lives. That such capability can soon be a reality is demonstrated by ATX's participation in the Commonwealth of Virginia's Intelligent Transportation System (ITS) Public Safety Initiative in the Shenandoah Valley. ATX equipped vehicles are able to provide emergency responders in the Shenandoah Valley a text version of the emergency information that otherwise must be conveyed by voice. The text information is relayed in real-time and allows an immediate response by each authorized agency impacted by the emergency.

More broadly, the Standard represents the foundation of the Nation's wireless network. The Standard and the capacity needed to support is the underpinning of the ubiquitous wireless network that promotes a range of critical public interest elements, from the ability to communicate across the country, rural, suburban, or urban, to assisting the hearing impaired, to fulfilling public safety needs through telematics technologies. Any evolution from analog to digital must examine how these applications can be replicated in the digital environment.

**THE DIGITAL NETWORK IS STILL NASCENT AND WILL NOT RELFECT THE CAPACITY AND QUALITY OF ANALOG FOR THE DISTANT FUTURE**

Many do not realize the severe limitations encompassing data transmission and digital voice technology. Before the AMPS Standard can be eliminated, including the capacity necessary to support it, the digital environment must be able to reflect the ubiquitous environment encompassing a range of services relating to the transmission of voice and data. Not only does the digital environment fall far short of anything approaching ubiquity, the digital environment is fundamentally voice directed. The quality, security and dependability, particularly when attempts are made to integrate data with voice transmissions, are not present.

Investment in digital data transmission has lagged considerably behind voice. In ATX's ACN service, which all providers of OEM factory-installed telematics offer, a critical part of bringing emergency assistance to drivers involved in a collision encompasses an integrated voice/data capability. As noted, when a collision occurs, information by way of data is transmitted to the ATX service center. ATX is able to pinpoint the location of the vehicle to request public safety agency assistance. At the same time, a voice communication is opened over the same network to determine the degree of help needed. In-vehicle hands-free wireless voice connection to the vehicle's passenger enables telematics operators to begin to gauge the severity of the emergency.

Unlike the analog networks telematics technologies currently depend on, the digital environment cannot yet match the analog network's geographic ubiquity or reliability to transmit voice and data simultaneously. In an emergency situation, it is important to place a call quickly, affix a location to that call, deliver relevant data to the correct emergency response agency with jurisdictional authority, and establish voice communication with the driver. With digital voice systems such integration of voice and data is possible but has to demonstrate the reliability that is critical in an emergency circumstance. And the footprint for digital networks does not even cover half the footprint for today's analog network.

Contributing further to the challenges faced in the digital environment in North America, unlike Europe and Japan, is what happens to data when it passes from one system (e.g. CDMA) to another (e.g. TDMA/GSM). Massive agreements must be in place for this to work and they are not. The incompatibility of the systems will continue to pervade for some time to come.

**What NTIA Should Consider**

In analyzing the progress made toward deploying broadband networks and advanced telecommunications services, and in formulating the Administration's policies in this regard, ATX urges NTIA to recognize that any accelerated movement away from AMPS (including the capacity to support it) without corresponding advancements in simultaneous voice and data transmission in the digital world, will actually produce a

wireless network that is less robust in provide location-based safety than what Americans enjoy today. Imagine explaining to the 2 million customers who now enjoy location-based service in their vehicles today that it will be able to work in only half the area it is available today – and that it will be less reliable. A range of enhanced vehicle safety and security services encompassing the transmission of voice and data information depends upon a ubiquitous network that is not duplicated in the digital environment.

In examining the issues surrounding the transition to the digital environment, we urge NTIA to make clear the important goal reflected in the principles of the Nation's communications policy-- a ubiquitous wireless network able to promote the public safety needs of the American people.  This objective translates to ensuring that the many valuable applications emanating from the AMPs can be replicated in the digital environment.  The record indicates that AMPS must continue at least until there is a suitable nation-wide substitute. The complexities, costs and difficulties associated with replicating the analog environment in the digital format are substantial.  ATX urges NTIA to examine closely the transition to digital and how the digital environment must evolve before any change can take place.  Abandoning the AMPS standard without a reasoned transition would not be in the public interest; it would harm users and compromise public safety and homeland security.

This critical transition involves more than telematics.  During this period of unprecedented threats to national security, the analog network remains the only nationwide wireless framework that links the country together in a common

communications platform and provides proven location-based safety and security. The ubiquitous character and broad potential for a range of technologies and services afforded by analog must continue to be available.

ATX commends NTIA for its inquiry into the deployment of broadband networks and advanced telecommunications and the challenges presented. Please call upon us if we can assist your review in any way.

Respectfully submitted,

**ATX TECHNOLOGIES, INC.**


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